

Minitek® MicroSpeed 1.00mm Board-to-Board Connector

Product Presentation

Amphenol Information Communications
and Commercial Products

 ***FCi Basics***

Amphenol ICC

- Value Proposition
- Product Overview
- Product specifications
- Features & Benefits
- Part Numbers
- Market Applications
- Collaterals

- Minitek® MicroSpeed connector family is known for its **fast data transmission, high signal quality**, and **time-proven reliability** under extended periods of application.
- This shielded connector with 1.0mm pitch provides **superior EMI / EMC performance**, and enables high-speed data transfer up to **25Gb/s**. Suit for applications that require high-speed transmission.
- Minitek® Microspeed is designed with a **robust frame** together with **blind-mating** features, the aspects which are decisive for use in **industrial environments**.
- The family now contains R/A receptacle&header, also has Vertical receptacle&header , which make it possible to **support all PCB orientation** applications (perpendicular & coplanar¶llel).
- Minitek® MicroSpeed is a licensed second-source to ERNI with an exact cross-reference for mating parts.

Minitek® MicroSpeed 1.00mm

Product Overview

FCi Basics



R/A receptacle
R/A header



Vertical receptacle
Vertical header



R/A Combo

Combo connector with two ends,
One end features Microspeed receptacle interface,
The other one end features Microspeed header interface.

Minitek® MicroSpeed 1.00mm

Product Specifications



Product Facts

- 1.0mm double-row contact pitch
- Vast range of sizes and stack heights
- Supports speed performance up to 25Gb/s
- Electromagnetic Compatibility (EMC)

Basic Specifications

Pitch	1.0 mm
Pin Count	Up to 56
PCB Termination	SMT
Conn Direction	Right Angle, Vertical
Plating	Gold / GXT on contact area, and tin plating on soldering tail

Technical Documents

- Product Spec.: GS-12-1446

Performance Characteristics

- Durability: 500 cycles
- Mating and un-mating Force: 1N max./contact
- Temperature Range: -55°C to +125°C
- Current Rating: 1A per contact; 10A per shield
- Insulation Resistance: $1 \times 10^{10} \Omega$ min.
- Contact Resistance: <50 m Ω max.
- Signal Integrity
 - Data rate: up to 25Gbps
 - Multiline crosstalk: < 0.5% at 50ps (10-90%)
 - Differential impedance: 100 Ω
 - Single ended impedance: 50 Ω

Materials

- Housing: Glass filled LCP (UL94V-0, MSL level 1)
- Contact Base Metal
 - Receptacles: Copper Alloy, high spring
 - Headers: Copper Alloy, high spring
- Shell: Copper Alloy, high spring

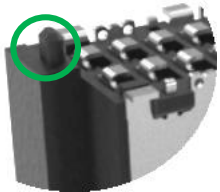
Minitek® MicroSpeed 1.00mm

Features & Benefits

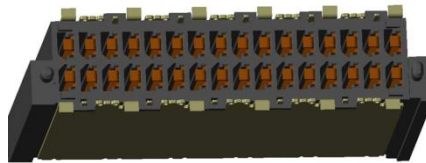
Features	Benefits
High speed performance up to 25Gb/s	Can be used in high-end computing and signal transfer applications in data communication telecommunication, computing, medical technology and industrial automation segments.
EMI Shielding	Significantly reduced coupling inductance leading to excellent electromagnetic compatibility.
Dual-beam receptacle contacts	Provides high electrical reliability and withstands high level of vibration.
Blind-mating feature	Suit for those tasks where visual and tactile tools are compromised during mating process.
Vertical , Right Angle and Combo solutions	Support various applications.
Lead-Free and RoHS compliant	Meets environmental, health and safety requirements
Licensed second source to ERNI with an exact mating cross-reference	Allows direct selection and usage of mating counterpart for ERNI's product

Minitek® MicroSpeed 1.00mm

Features & Benefits



1 Easier to locate to board with help of **post pegs**.



2 Both contact & shield tails ensure **robust connection** with board.



3 Dual-beam receptacle contacts make **connection more reliable**.



4 **EMC shield**.



receptacle



header

5 Extended guide on receptacle and self-alignment features on header to achieve **Blind mating**.

Minitek® MicroSpeed 1.00mm Part Numbers

Description	Part Numbers
Minitek® MicroSpeed 26P R/A Header, P	10146153-2600RLF
Minitek® MicroSpeed 32P R/A Header, B&P	10150096-3200RLF
Minitek® MicroSpeed 26P R/A Receptacle, P	10147073-2600RLF
Minitek® MicroSpeed 32P R/A Receptacle, B&P	10150095-3200RLF
Minitek® MicroSpeed 44P R/A Receptacle, P	10147074-4400RLF
Minitek® MicroSpeed 26P R/A COMBO, P	10147075-2600RLF
Minitek® MicroSpeed 32P VT Receptacle,10MM HEIGHT, B&P	10150097-3200RLF
Minitek® MicroSpeed 32P VT Header,2MM HEIGHT, B&P	10150098-3200RLF

- R/A - Right Angle
- B - Blind mating
- P - POKA-YOKE

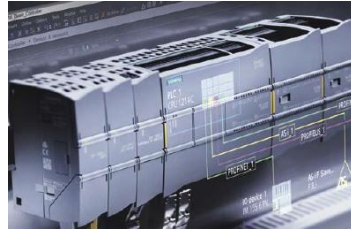


Minitek® MicroSpeed 1.00mm

Main Markets & Applications

Industrial & Instrumentation

- Factory automation
- PLC



Datacom/Telecom

- Server
- Storage



Medical

- MRI Machine
- Computed Tomography



Automotive

- MCU
- ADAS



- Available on Amphenol FCI website:
Technical Datasheet




Minitek® MicroSpeed 1.00mm Board-to-Board Connector


SHIELDED HIGH-SPEED BOARD-TO-BOARD CONNECTOR

Minitek® MicroSpeed connector family with 1.00mm pitch supports high-speed data applications with up to 25Gb/s. These connectors are authorized by Erni to provide second source support and exact cross mating. These connectors feature a shielded design that provides superior EMC performance and significantly improved electromagnetic compatibility. The poka-yoke polarization prevents visual mismatching, which makes it ideal for use in industrial environments.

- Supports high-speed performance up to 25Gb/s
- EMC shielding reduces coupling inductance, providing excellent electromagnetic compatibility
- Dual-beam contact with a robust design for customer application



TARGET MARKETS



FEATURES	BENEFITS
<ul style="list-style-type: none">• Authorized second source to Erni• Data transmission with speeds up to 25Gb/s	<ul style="list-style-type: none">• Fully compatible with Erni product offering• Suitable for high-end computing Datacom, medical and industrial applications
<ul style="list-style-type: none">• Blind mate interface• EMC shielding feature	<ul style="list-style-type: none">• Prevents misalignment, delivers consistent reliability and high performance• Reduced coupling inductance and excellent electromagnetic compatibility
<ul style="list-style-type: none">• Dual-beam female contact design• RoHS and low halogen compliant	<ul style="list-style-type: none">• Robust design for customer application• Meets health, safety and environment requirements

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Thank You!